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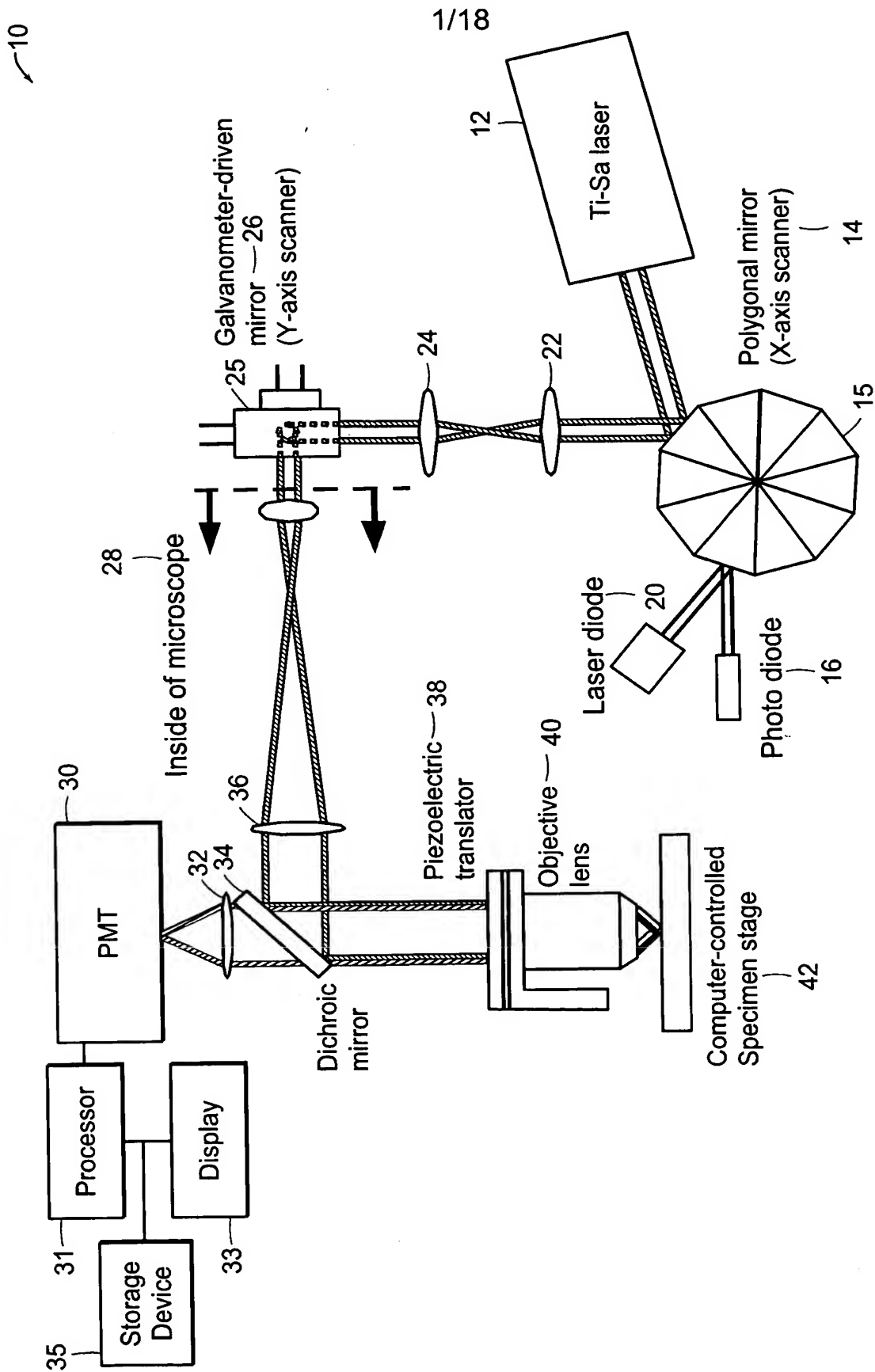
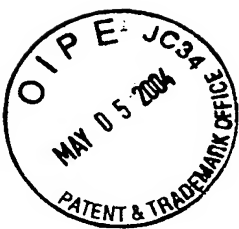


Figure 1A

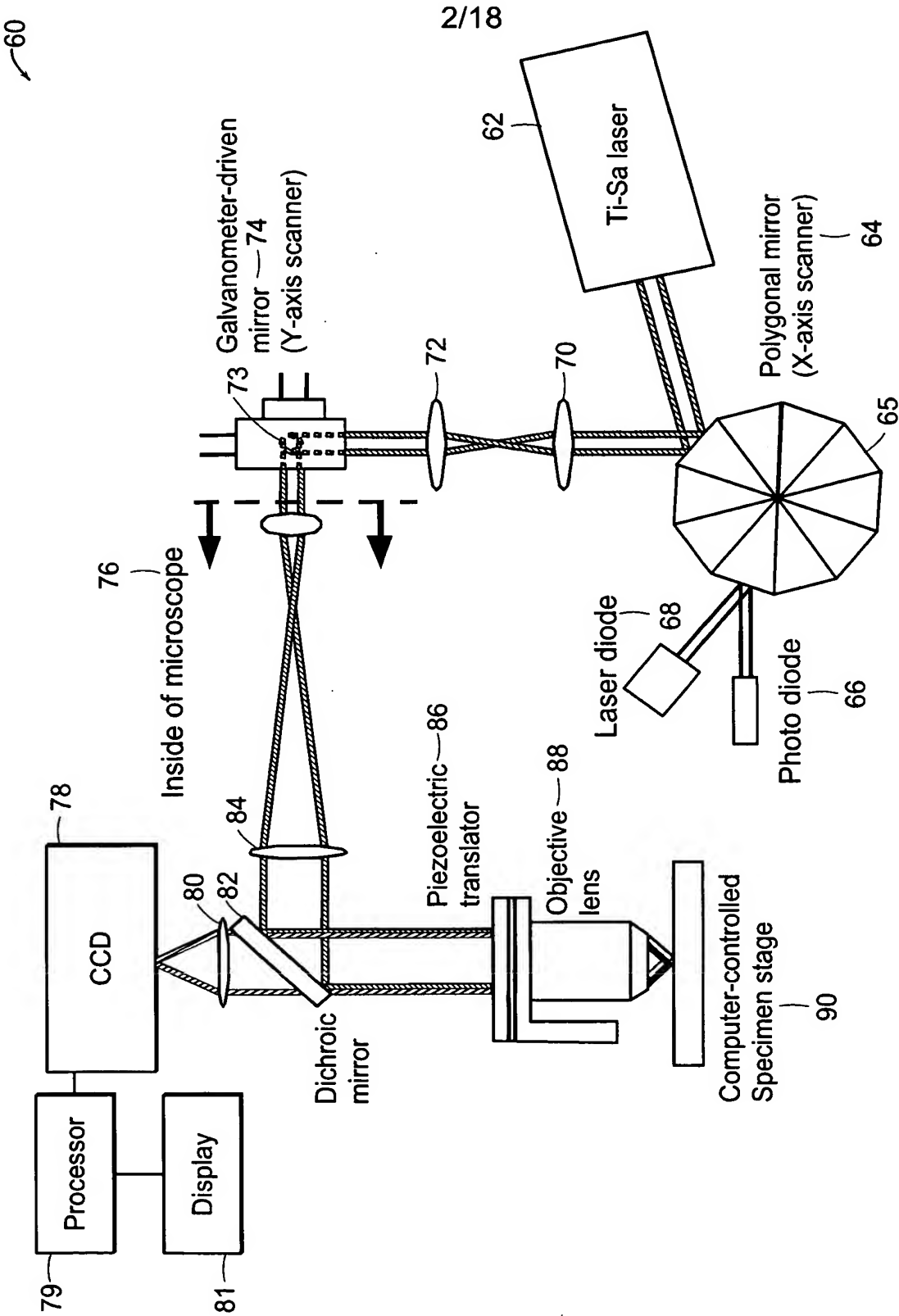


Figure 1B

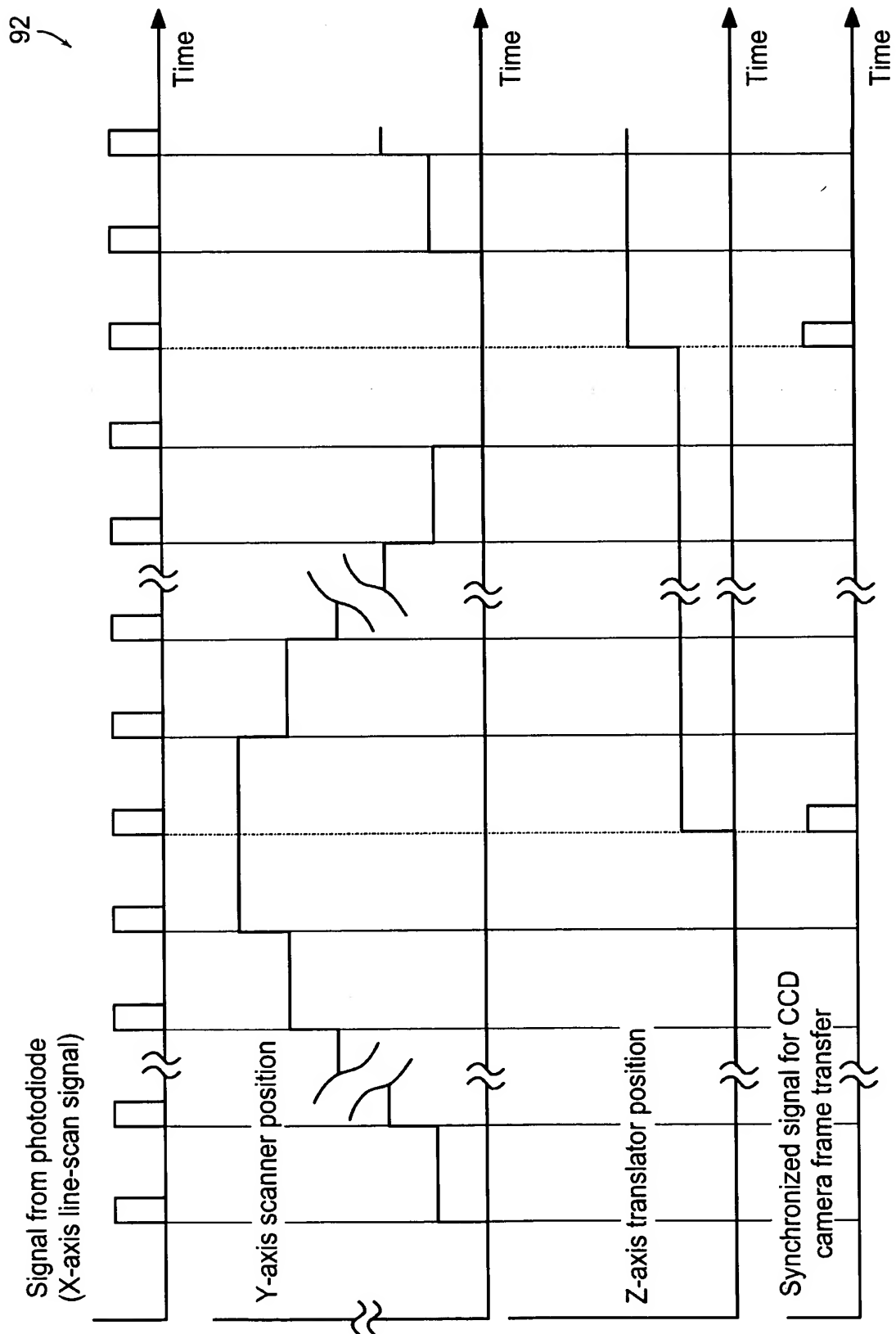


Figure 2

4/18

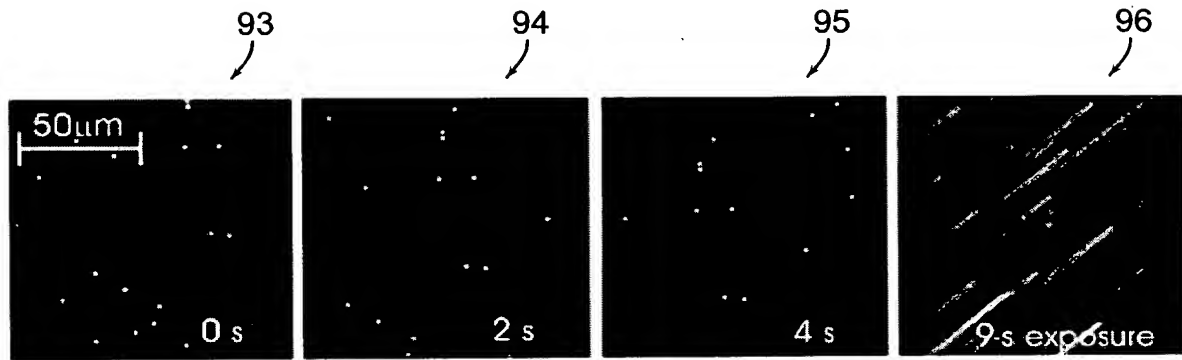


Figure 3A

Figure 3B

Figure 3C

Figure 3D

5/18

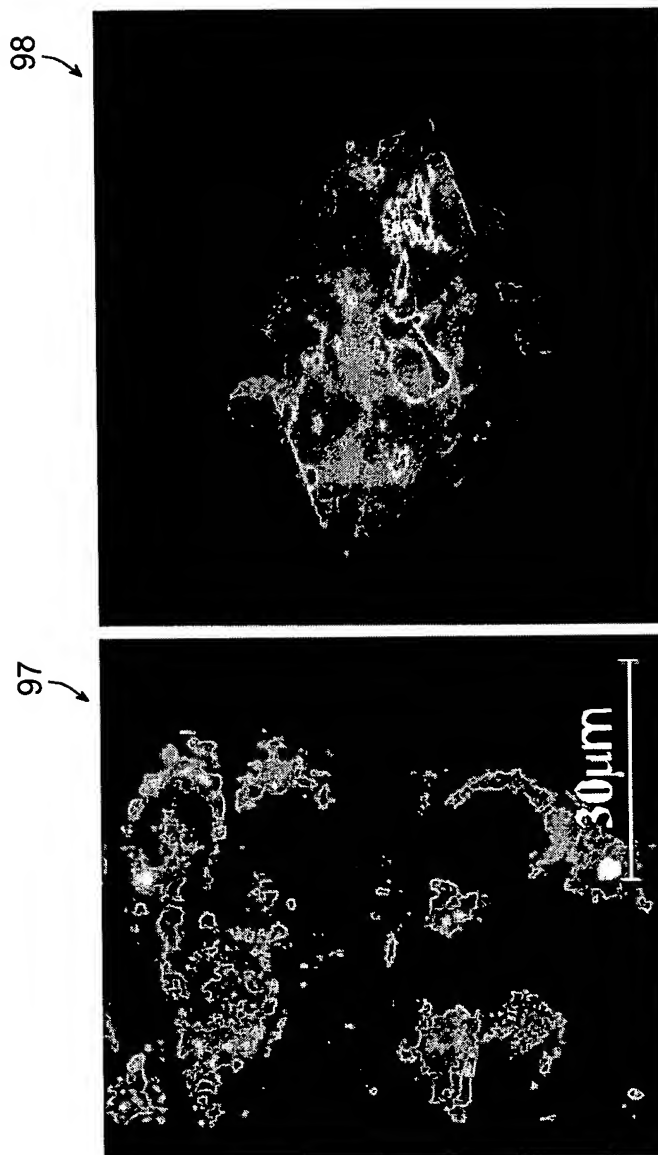


Figure 4B

Figure 4A

6/18

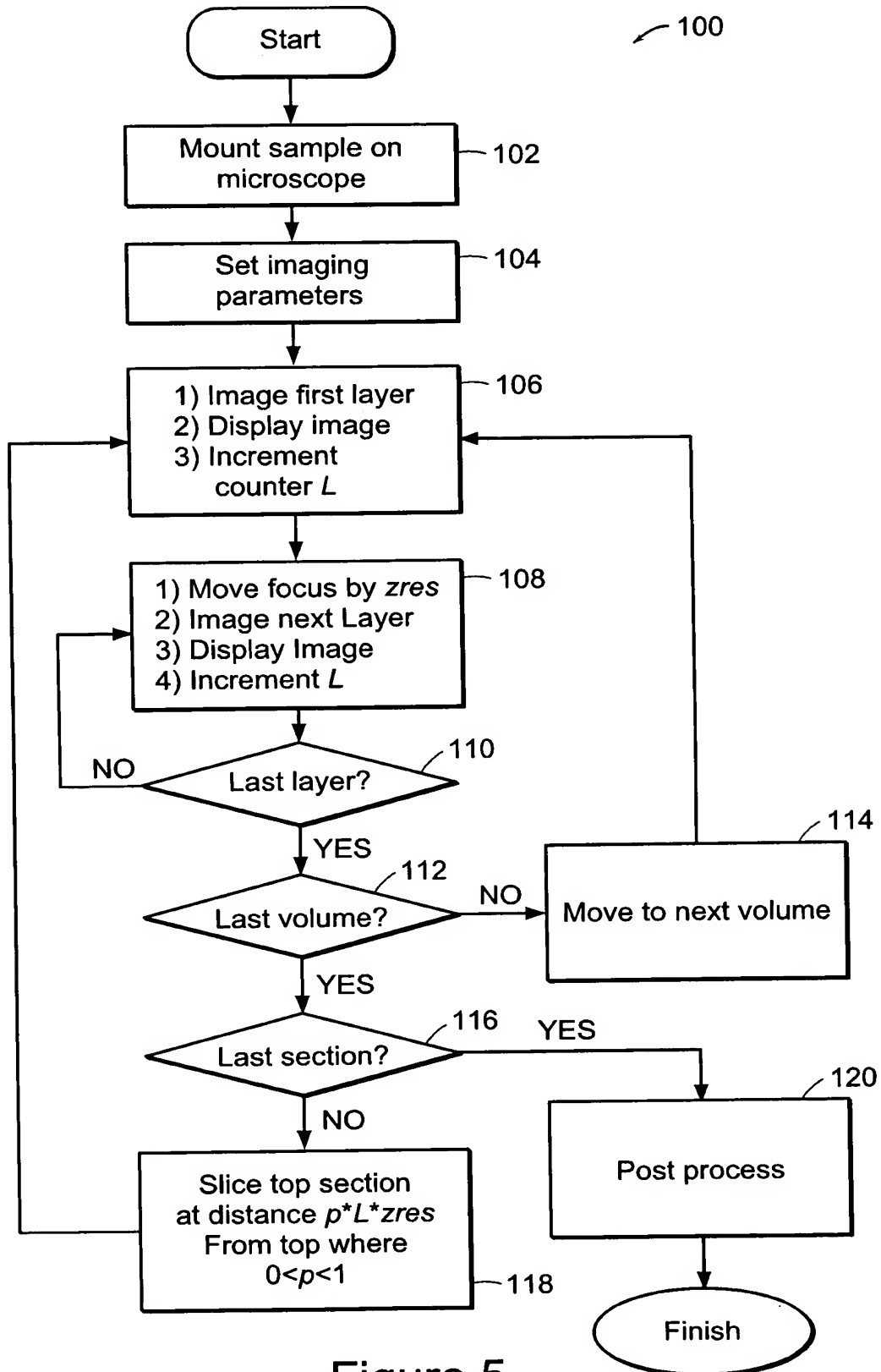


Figure 5

7/18

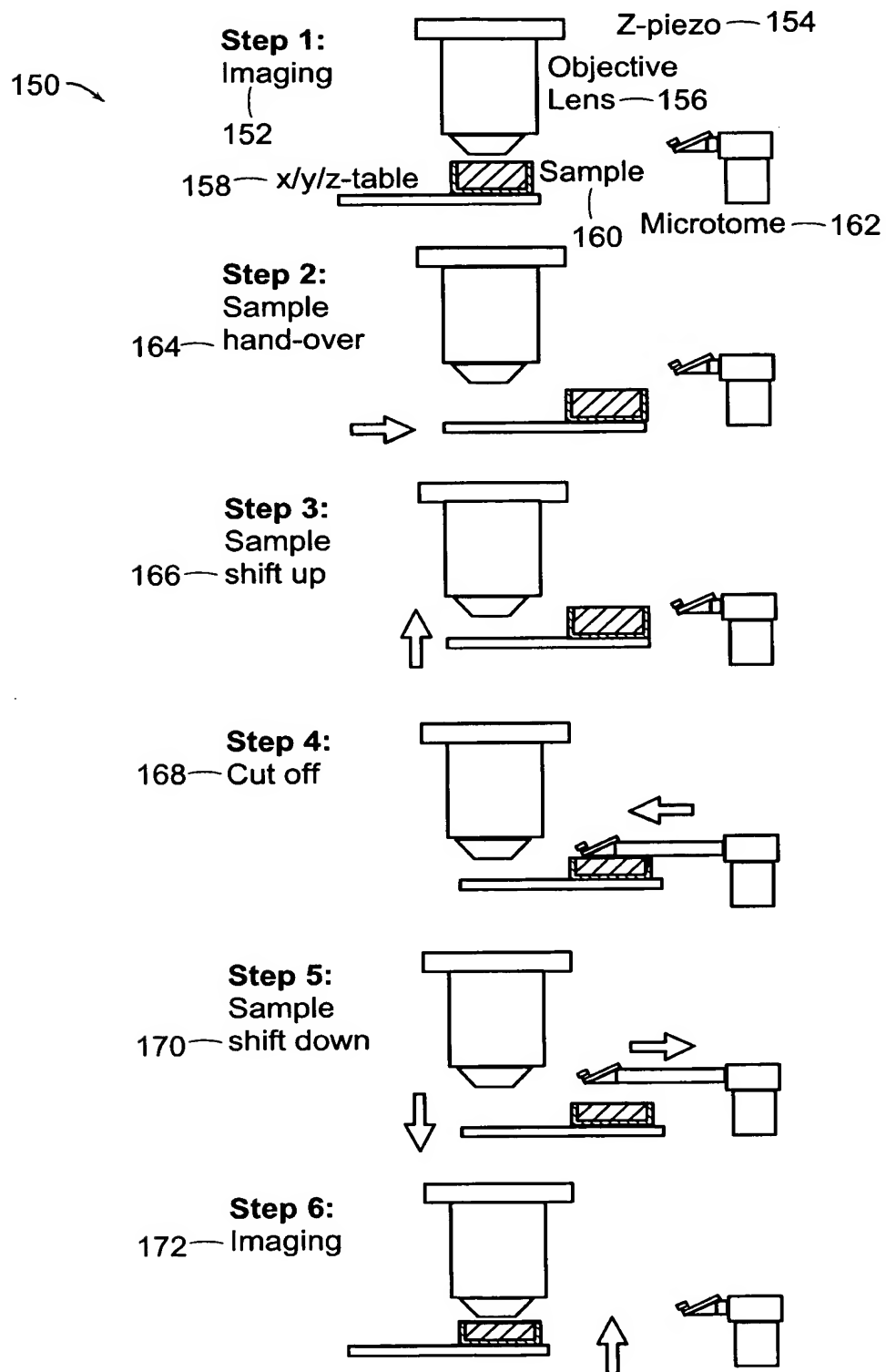


Figure 6

8/18

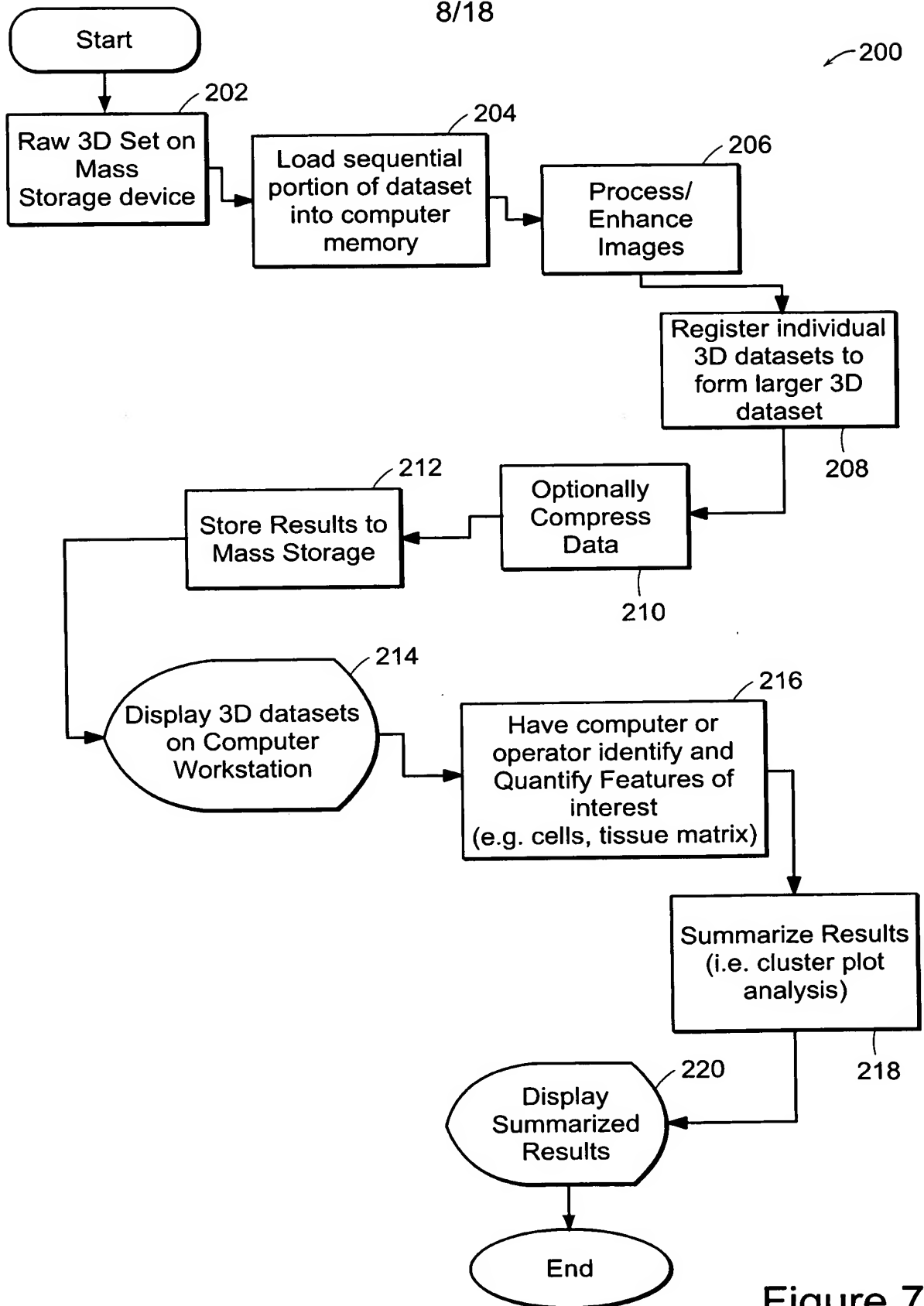


Figure 7

9/18

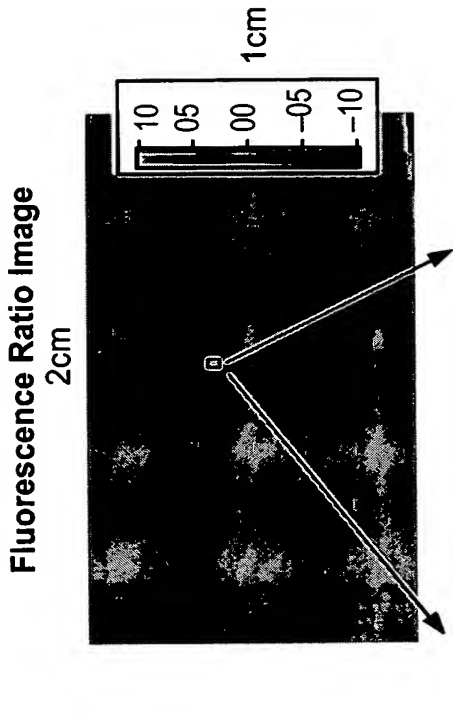
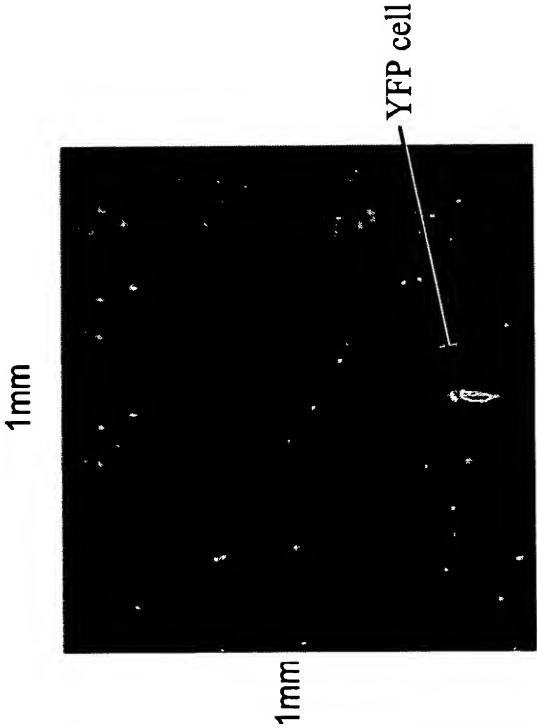
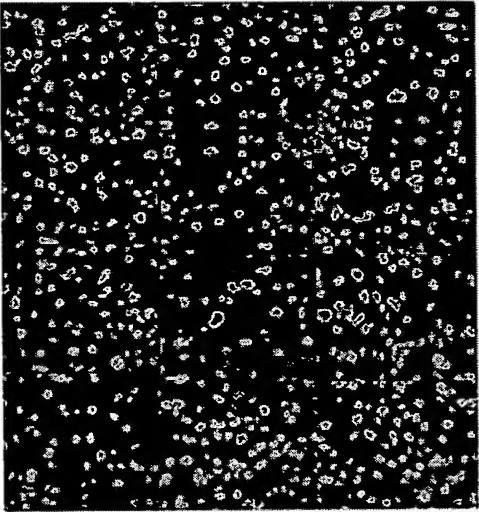


Image Cytometry Data
Fluorescence ratio image of a mixture of 3T3 cells and YFP cells dispersed on a coverslip. The cell nuclei are stained with Hoechst 3342



Green Channel (YFP)
Figure 8B



Blue Channel (Nuclei)
Figure 8C

10/18

High Resolution Volumetric Imaging of Mouse Brain

A mouse was genetically engineered to co-express GFP along with actin in the brain. The brain was excised and then fixed in 4% paraformaldehyde and then embedded in paraffin.

Imaging Parameters:

1 μm xy resolution; 3 μm z resolution
Eighteen 60 μm microtome sections
Imaging Time: 45 minutes
Approximately 1×10^5 cells

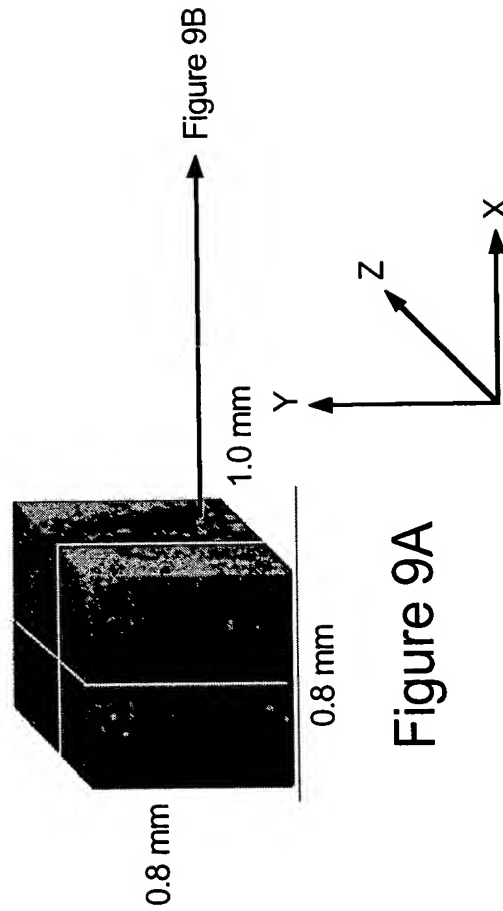


Figure 9A

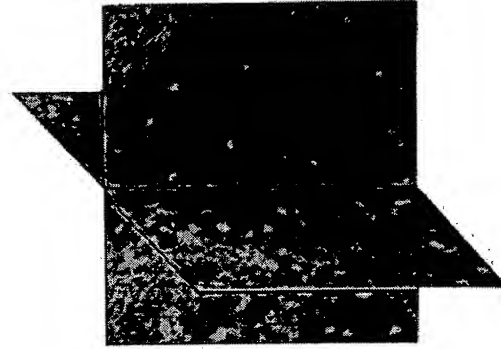


Figure 9B

Data Analysis

A segmentation of the images is performed and the nuclei are categorized by several parameters:

- Parameter Set
- 1) Nuclear Area
 - 2) Nuclear Circularity
 - 3) Fluorescence Ratio
 - 4) YFP (green channel) intensity

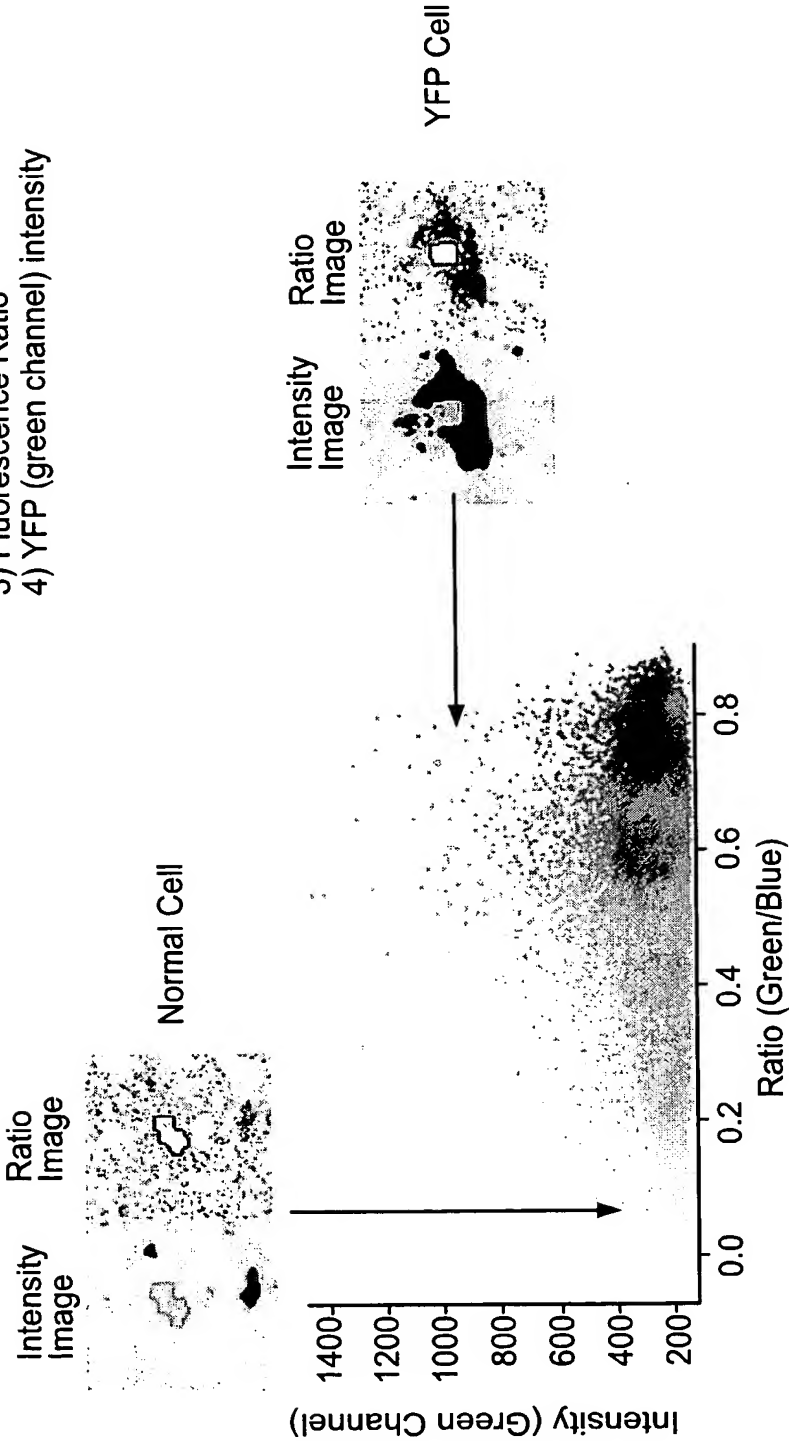
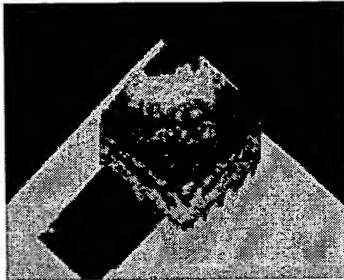


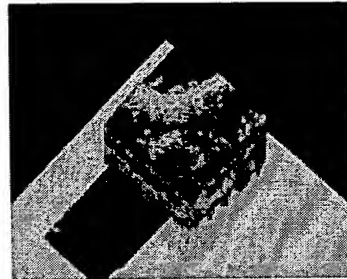
Figure 10

12/18



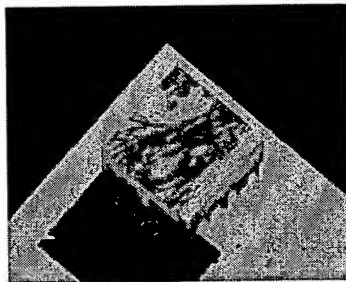
A cell layer in the
epidermis

Figure 11A



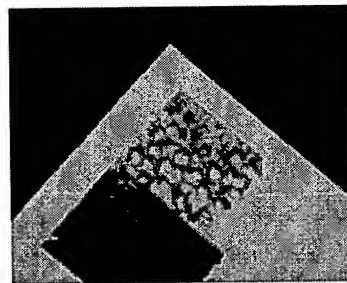
Basal cell layer in
epidermis

Figure 11B



Collagen/elastin fibers
in the dermal layer

Figure 11C



Honeycomb-like
cartilage structure

Figure 11D

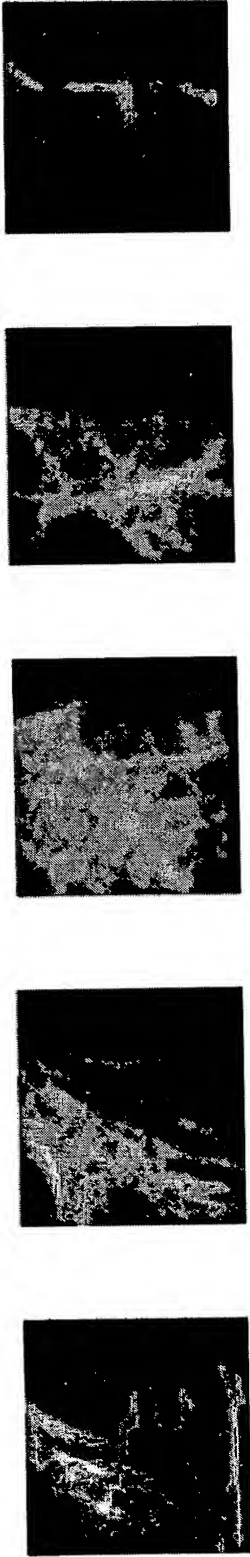


Figure 12A Figure 12B Figure 12C Figure 12D Figure 12E

13/18

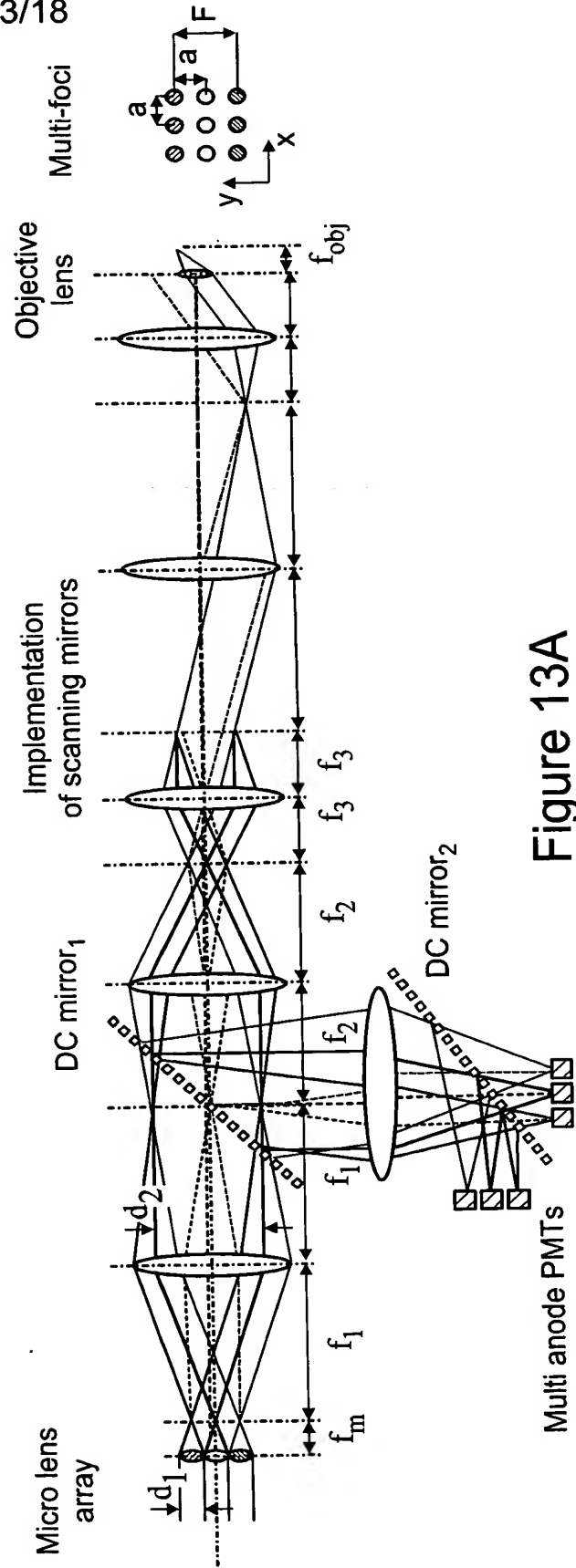
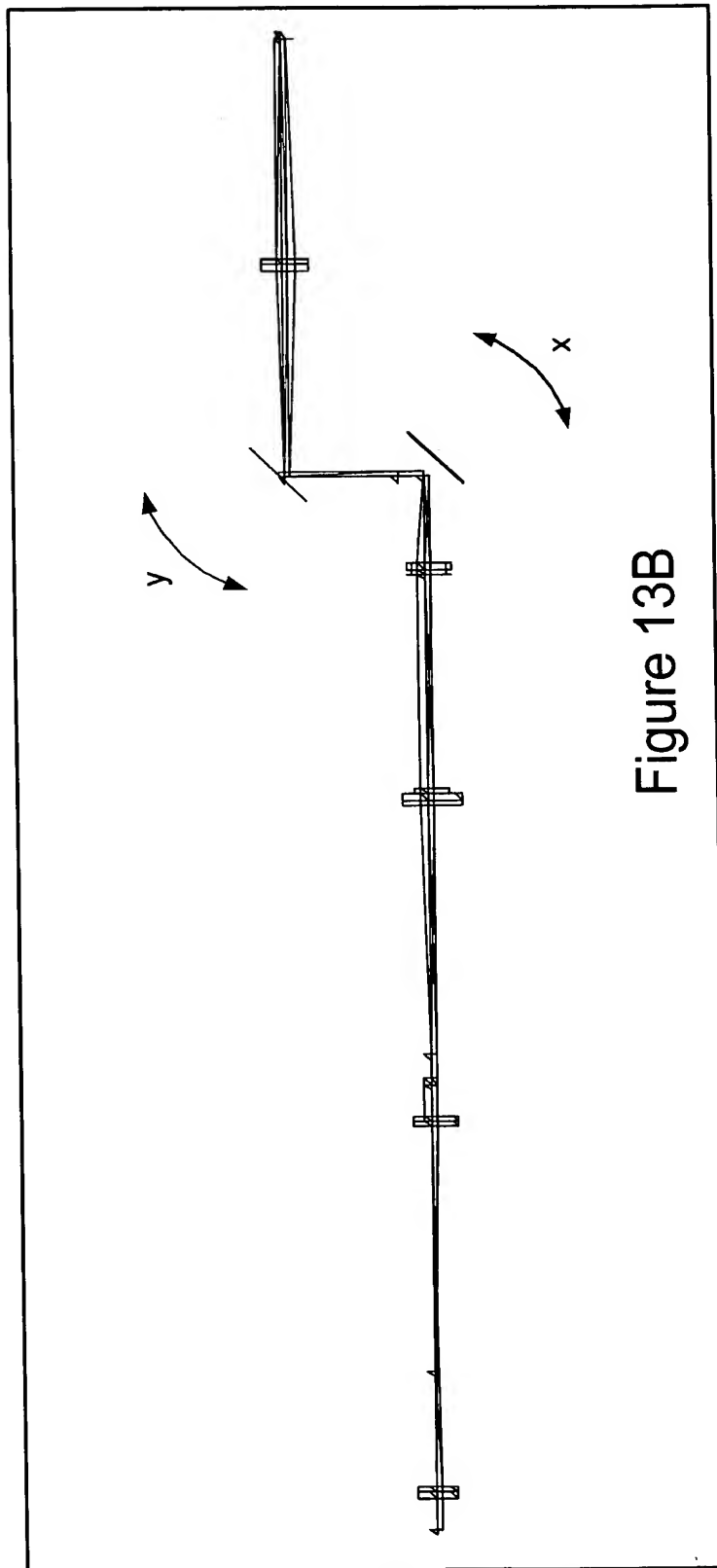


Figure 13A

14/18



15/18

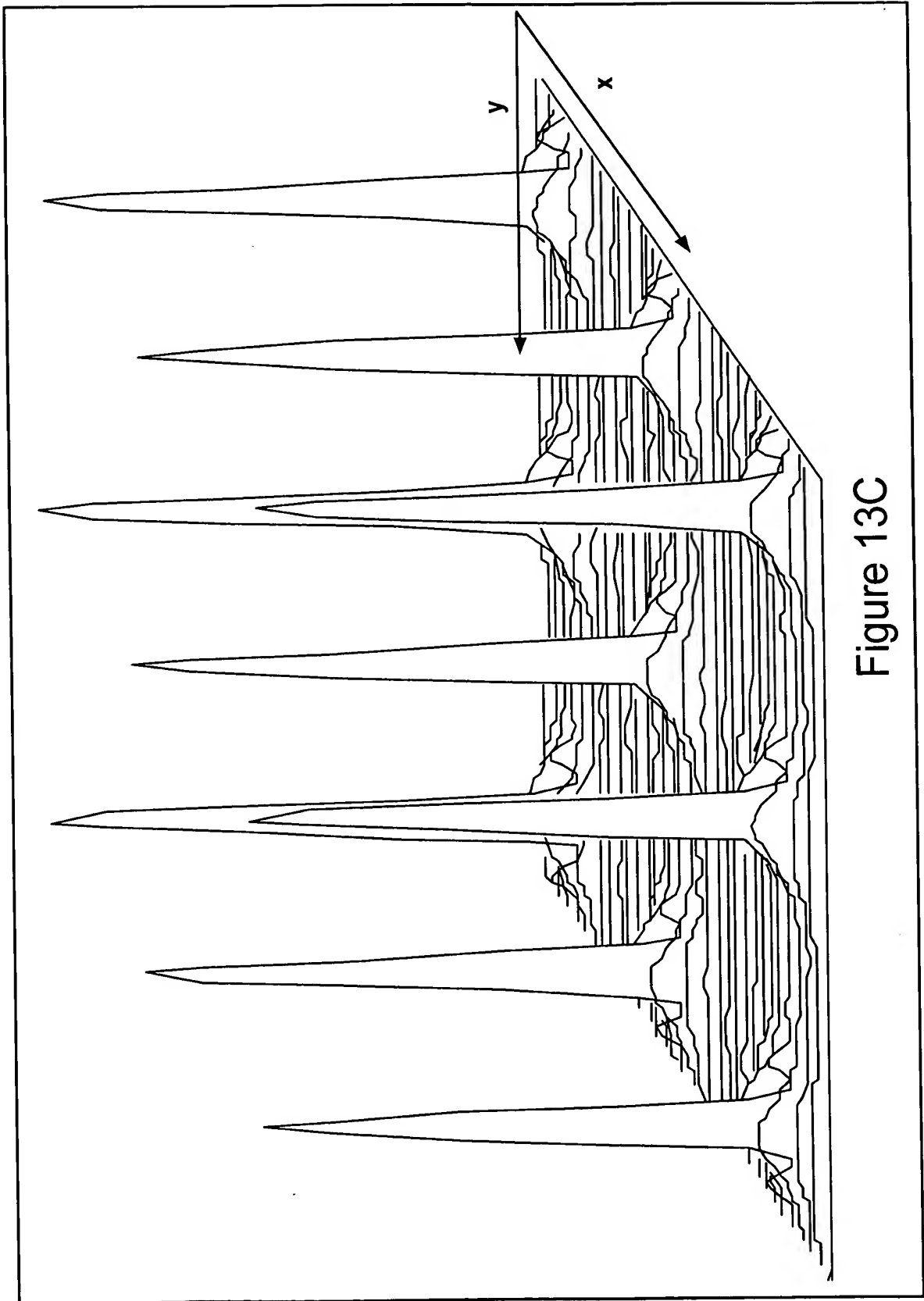


Figure 13C

16/18

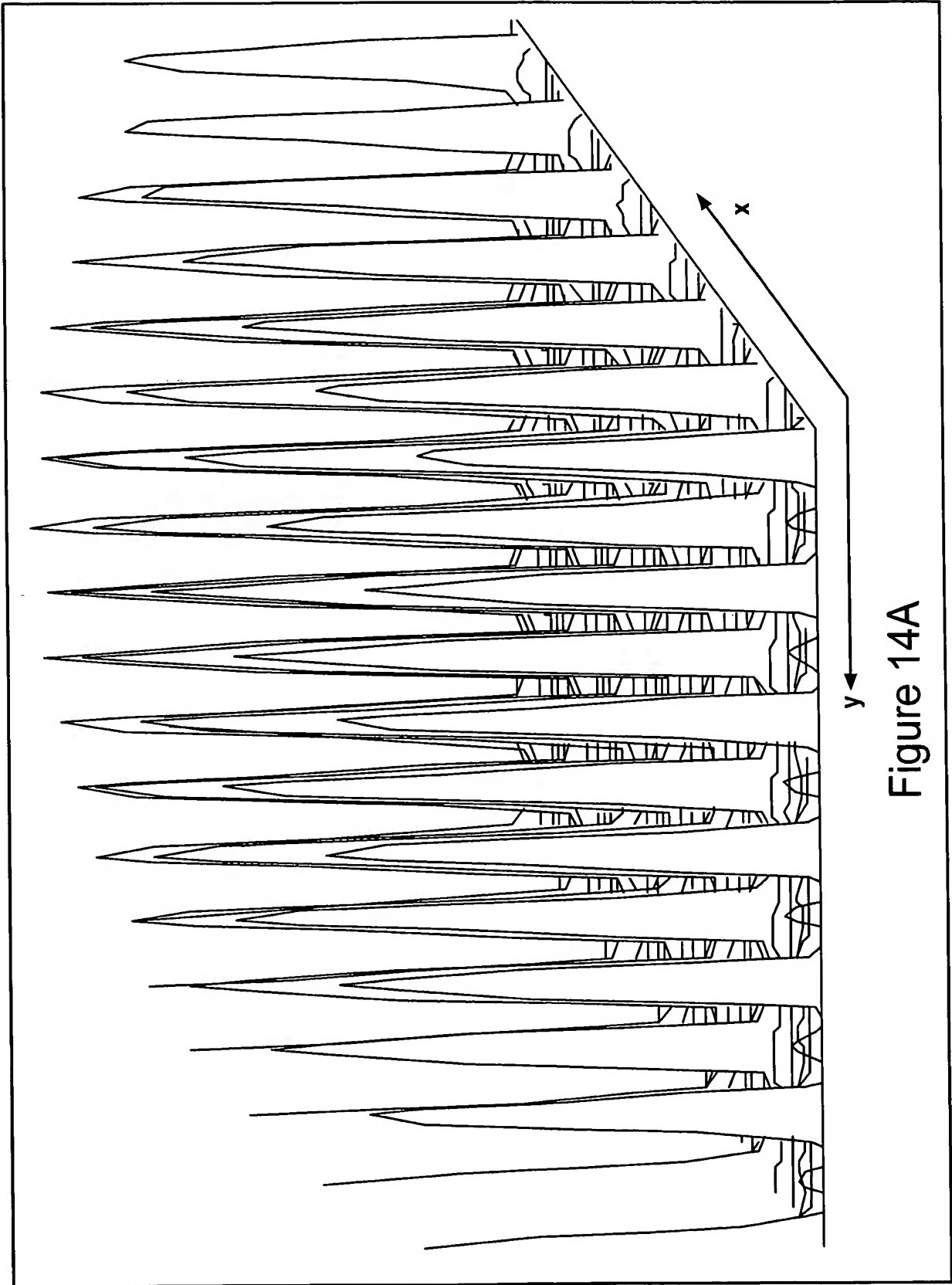


Figure 14A

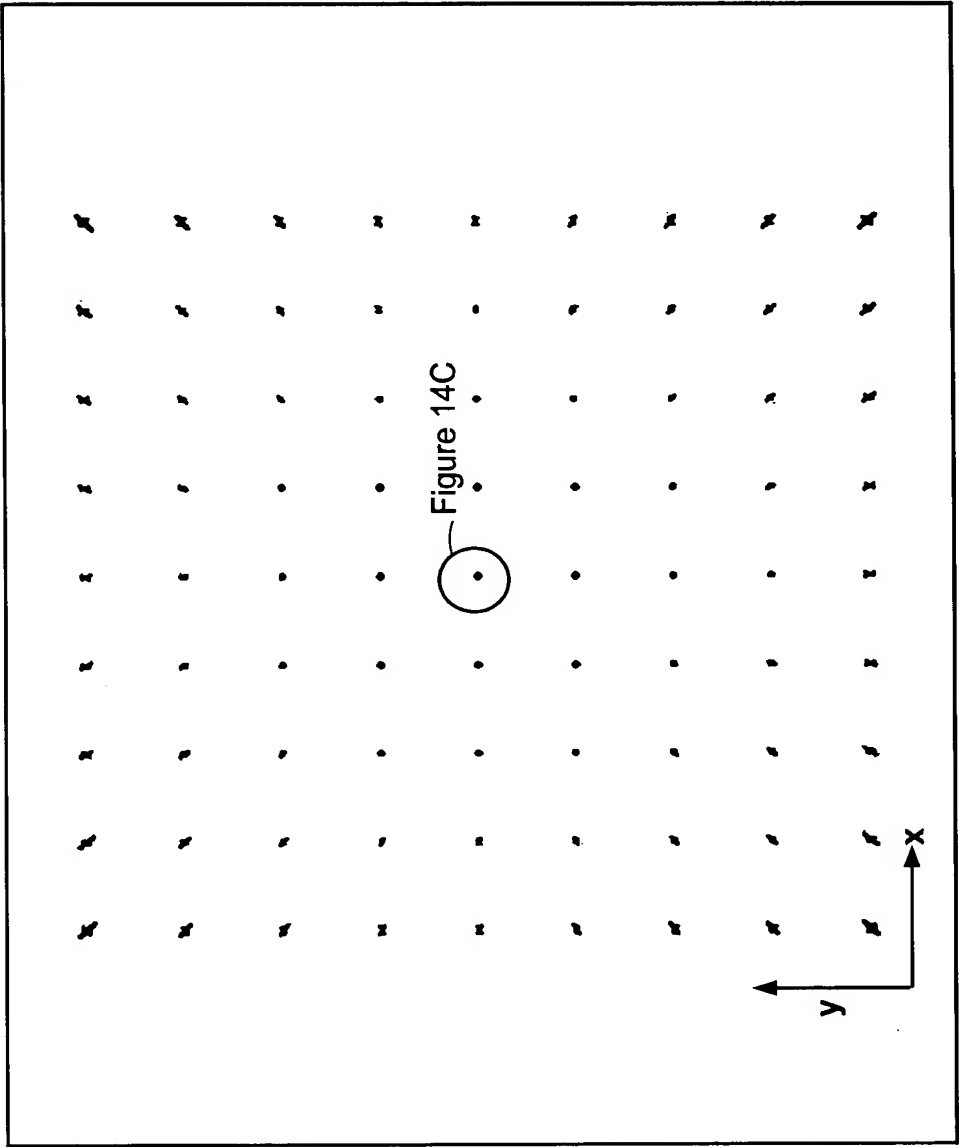


Figure 14B

